



A condition-based maintenance policy based on a probabilistic meta-model in the case of chloride-induced corrosion

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Auteur	Hajj, Boutros El [1], Castanier, Bruno [2], Schoefs, Franck [3], Bastidas-Arteaga, Emilio [4], Yeung, Thomas [5]
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Mots-clés	data-driven approach [6], Degradation models [7], maintenance [8], meta-models [9], stochastic process [10]
Résumé en anglais	<p>Maintenance and management policies are usually focused on minimizing the life-cycle cost only. Therefore the optimal solution in this context does not necessarily result in a satisfactory long-term structural performance. In this paper, we will present an approach for modeling the degradation of structures and infrastructures for maintenance purposes. The degradation is modeled using probabilistic data-driven state dependent stochastic processes, hereafter called meta-model.</p> <p>This work implements this degradation model into a maintenance framework and carries out two numerical examples in order to show the applicability of meta-models in a maintenance and management optimization context. This paves the road for future work on meta-model updating and maintenance optimization by considering multi-objective optimization policies.</p>
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